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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,490	01/09/2002	Yuki Nakamura	2271/66507	9287

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EXAMINER

ANGEBRANDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/044,490

Applicant(s)

NAKAMURA ET AL.

Examiner

Martin J. Angebrannt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,24,27,30,44-55 and 57-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) 21,24,27,30, 44-55 and 57-66 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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1. The response of the applicant has been read and given careful consideration. Responses to the arguments of the applicant are presented after the first rejection to which they are directed. The priority document have been received and reviewed. The subject matter of claims 21 and those dependent upon it are accorded the date 01/12/2001 (filing date of JP 0003084). The subject matter of claims 44,47 and those dependent upon them are accorded the date 03/01/2001 (filing date of JP 0005244). The subject matter of claims 51 and those dependent upon it are accorded the date 01/10/2001 (filing date of JP 0003083).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 51-54,57 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kikukawa et al. '722.

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Example 3 uses $\text{Ag}_6\text{In}_4\text{Sb}_{62}\text{Te}_{26}\text{Ge}_{0.2}$. The structure is that of example 1 and includes a substrate, an 80 nm ZnS-SiO₂ layer, a 23 nm recording layer, a 25 nm ZnS-SiO₂ layer, and 100 nm Al-1.7% Cr reflective layer. (11/23-58). The Te range may be ~10-50% and the Sb content may be ~40-90%. The addition of nitrogen or Ge results in improvements in the thermal stability of the marks formed and more reproducible mark dimensions. (3/65-4/41). Useful AgInTeSb compositions are disclosed and are preferably $\text{Ag}_{0.02-0.10}\text{In}_{0.02-0.10}\text{Sb}_{0.50-0.75}\text{Te}_{0.10-0.35}$

It would have been obvious to modify the example 3 by changing the composition the Sb content and decreasing the Te content to be $\text{Ag}_6\text{In}_4\text{Sb}_{64}\text{Te}_{24}\text{Ge}_{0.5-2}$ with a reasonable expectation of forming a useful optical recording medium based upon the values being within the range.

The applicant argues that the composition is not rendered obvious, but provides no support for this position, the examiner has pointed to the Te range may be ~10-50% and the Sb content may be ~40-90%. In the reference and holds that this provides motivation to diverge from the few exemplified compositions with a reasonable expectation of success in forming a useful optical recording medium. Further, the use of Al reflective layers containing 1.7% Cr is found in the example cited.

5. Claims 51-54 and 57-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikukawa et al. '722, in view of Mizuno et al. EP 1047056.

Mizuno et al. EP 1047056 teach phase change optical recording media using compositions having SbTe and additives including at least one of Ge and the like [0053]. Reflective layer compositions include Al alloys with 0.2 to 2.0 % Ta, Ti, Co, Cr, Si, Sc, Hf, Pd, Pt, Mg, Zr, Mo or Mn to increase durability, deposition rate and volume resistivity [0183]. The use of Ag alloys

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including 0.2 to 5 % Ti, V, Ta, Nb, W, Co, Cr, Si, Ge, Sn, Sc, Hf, Pd, Rh, Au, Pt, Mg, Zr, Mo, or Mn in increase heat dissipation, increase productivity and stability [0187-0188].

To address the embodiments bounded by the claims, but not rendered obvious above, the examiner holds that it would have been obvious to modify the embodiments rendered obvious above by Kikukawa et al. '722 by using Al reflective layers containing 0.3-2.0% of Si, Cr, Ti or Ta or Ag layers containing 0.2 to 4% of Au, Pd, Pt, or Ti as disclosed by Mizuno et al. EP 1047056 in place of the single reflective layer composition disclosed with a reasonable expectation of forming a useful phase change optical recording medium based upon the disclosure of equivalence by Mizuno et al. EP 1047056.

6. Claims 21,24,27,30,49-55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. EP 0717404 or Yamada et al. EP 0735158, in view of Kikukawa et al. '722.

Yamada et al. EP 0717404 in examples 2 and 3 in table 2 have the compositions shown in tables 2 as the recording layer in media comprising a polycarbonate substrate, a 200 nm ZnS-SiO₂ lower dielectric layer, a 25 nm AgInTeSb recording layer, a 30 nm ZnS-SiO₂ upper dielectric layer, a 100 nm Al alloy reflective layer and a 5 micron UV cured resin as the protective layer. The sum of the Te and Sb are 91 and 85.4 % respectively. Comparative examples 1 and 2 use the same structure and meet the limitations of the claims. (table 2, cont). The sum of the Te and Sb are 99.5 and 95.9 % respectively. The benefits of adding 2% nitrogen is illustrated in table 3 on page 12. The addition of Ti, Cr or Si to the reflective layer is disclosed. (8/29-31). The maximum number of overwrites is defined by the number before the 1 sigma jitter is above 35 ns. (13/50-51). The addition of Ge, C, N, O, Al, Ga, Se, Pd, or Pb to the

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recording layer is disclosed. (7/56-58). Level three describes discs with a C/N or 55 dB and erasability of -35dB. (10/16-17) The level denoted in the table corresponds to the conditions for determining the number of overwrites shown in the tables.

Yamada et al. EP 0735158 in examples 3, 5-7 comparative example 2 and 3 in table 2 have the compositions shown in tables 2 as the recording layer in media comprising a polycarbonates substrate, a 200 nm ZnS-SiO₂ lower dielectric layer, a 25 nm recording layer, a 30 nm ZnS-SiO₂ upper dielectric layer, a 100 nm Al alloy containing 1 % Si as the reflective layer and a 10 micron UV cured resin as the protective layer. The sum of the Te and Sb are 85.5, 92,92,91 and 94.5 % respectively. Example 10 in table 2 on page13 also includes nitrogen. The addition of various elements to the recording layer is disclosed. (7/48-52). The use of various alloys of Al, Au, Ag and Cu are disclosed. (9/26-27). Level three describes discs with a C/N or 55 dB and erasability of -35dB. (10/16-17) The level denoted in the table corresponds to the conditions for determining the number of overwrites shown in the tables.

It would have been obvious to one skilled in the art to modify the cited inventive examples of Yamada et al. EP 0717404 having the level 3 performance such as example 3 of Yamada et al. EP 0717404 in a manner similar to example 17 shown in table 3 (page 12) but using Ge rather than nitrogen based upon the disclosure to add Ge at (7/56-58) in place of nitrogen based upon this teachings of equivalence and that of Kikukawa et al. '722 evidencing that the addition of either of these elements resulting in improvements in the thermal stability of the marks formed and more reproducible mark dimensions with a reasonable expectation of forming a useful optical recording medium with level 3 performance and jitter of less than 35 ns

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and further to use Al-1.7% Cr reflective layers taught by Kikukawa et al. '722 as the Al alloy layer.

It would have been obvious to one skilled in the art to modify the cited inventive examples of Yamada et al. EP 0735158 having the level 3 performance such as example 3 of Yamada et al. EP 0735158 in a manner similar to example 10 shown in table 2 (page 13) but using Ge rather than nitrogen based upon the disclosure to add other elements at (7/48-52) in place of nitrogen based upon this teachings of equivalence and that of Kikukawa et al. '722 evidencing that the addition of either of these elements resulting in improvements in the thermal stability of the marks formed and more reproducible mark dimensions with a reasonable expectation of forming a useful optical recording medium with level 3 performance and jitter of less than 35 ns and further to use Al-1.7% Cr reflective layers taught by Kikukawa et al. '722 as the Al alloy layer.

The applicant is claiming the medium in a product by process format, therefore contrary to the position of the applicant, a reasonable assertion by the examiner, based in part upon the properties of the media reported in the prior art for the media of the of the prior art, that the media of the prior art and the claimed media are the same places the burden firmly upon the applicant to show that the process of the prior art does not result in media within the scope of the coverage sought. There are no requirements in MPEP 2113 that the exact process used be the same. Phase change recording media are conventionally initialized in the art prior to use. The applicant's characterization of the reference's teachings (as well as those of the other references applied) through mere restatement of the abstract is nowhere near a reasonable treatment of the complete teachings of the reference.

The examiner points to the high ratings of the various examples cited. These characteristics would not be present if the recording layer s was damaged. Further, applicant's own specification states "[0224] When the values shown in FIGS. 4 and 5 are compared, it is found that DOW 1 jitter tends to increase with decreasing energy density E. The range found for the E value is $E > 1000 \text{ J/m}^2$, for which jitter exceeds the 35 nsec that is specified as a standardized jitter value in the Orange Book " Bearing in mind the recording medium needs to conform with standards to be player reliably. The examiner holds that it is anticipated by the cited examples as it makes no sense to describe a medium as acceptable if it cannot be played on a conventional CD player. The examiner has pointed to the performance characteristics of the media, which meet or exceed the benefits ascribed to the resultant media. Therefore the examiner is correct in making the rejections asserted.

The addition of Kikukawa et al. '722 addresses the issue of the Al alloy reflective layer composition.

7. Claims 21,24,27,30,49-55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Yamada et al. EP 0717404 or Yamada et al. EP 0735158, in view of Kikukawa et al. '722, further in view of Mizuno et al. EP 1047056.

To address the embodiments bounded by the claims, but not rendered obvious above, the examiner holds that it would have been obvious to modify the embodiments rendered obvious above by the combination of either Yamada et al. EP 0717404 or Yamada et al. EP 0735158 with Kikukawa et al. '722 by using Al reflective layers containing 0.3-2.0% of Si, Cr, Ti or Ta or Ag layers containing 0.2 to 4% of Au, Pd, Pt, or Ti as disclosed by Mizuno et al. EP 1047056 in place of the single reflective layer composition disclosed with a reasonable expectation of

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forming a useful phase change optical recording medium based upon the disclosure of equivalence by Mizuno et al. EP 1047056.

The addition Mizuno et al. EP 1047056 addresses the issue of the Al or Ag alloy reflective layer compositions.

8. Claims 44-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over **either one** of Yamada et al. EP 0717404, Yamada et al. EP 0735158, Iwasaki et al. JP 03-240590 or Yuzurihara et al. JP 11-070737, **in view of** Ando et al. '175 and Suzuki et al. '780.

Iwasaki et al. JP 03-240590 in examples E and F in table 1 (page 5), which do not seem to have an increase in C/N or jitter after 10,000 overwrites.

Yuzurihara et al. JP 11-070737 in examples 21,24 and 26-29 in tables 2 and 3 have the compositions shown in these tables as the recording layer in media comprising a polycarbonates substrate, a 170 nm ZnS-SiO₂ lower dielectric layer, a 18 nm recording layer, a 20 nm ZnS-SiO₂ upper dielectric layer, a 120 nm Al alloy containing Ti as the reflective layer and a UV cured resin as the protective layer. The sum of the Te and Sb are 90.4 for example 21 and 89.2 % for the others. Note that addition of nitrogen to the recording layers in examples 27-29.

Ando et al. '175 describes the embossing of data relating to disk size, read out rate, recording density, serial numbers, linear velocity conditions, read power, peak power, base power and manufacture information (15/55-16/9)

Suzuki et al. '780 teach the determination of the performance characteristics of an optical recording medium including the optimum recording power (abstract and 4/53+) and the sensitivity of the medium (gamma) (3/3-35 and 4/12-5/59). The use of both of these allows a

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range (margin) of useful laser powers and prevents selection of an improper laser power. (4/12-5/59.

To support the assertion that embossing information relative to the performance characteristics of the optical recording media would have been obvious, the examiner cites Ando et al. '175 which teaches the provision of control data and specification data for the optical recording medium in a non-write-able portion of the medium and Suzuki et al. '780 which describe specific methods of characterizing the performance and holds that it would have been obvious to one skilled in the art to modify the media of **either one of** Yamada et al. EP 0717404, Yamada et al. EP 0735158, Iwasaki et al. JP 03-240590 **or** Yuzurihara et al. JP 11-070737 by determining the performance characteristics and recording this information as described by Suzuki et al. '780 to prevent improper choice of laser powers and to provide at least some of this data as embossed information as described by Ando et al. '175 to allow the user for forgo the optimization process.

The applicant's arguments neglects to recognize that the values of R and S actually correspond to real parameters in the recording process, but these values are not recorded in the medium as the values of P_1 and P_0 are, but are chosen when writing to the medium. These really limit the process of use, not the medium as they are never written into the medium. The examiner reiterates that the claims are to the media, not the process of use. Were the claims directed to the process of use, the applicant's arguments would be at least more persuasive as the reference determines the same basic information (the optimum operating parameters) for the medium. In particular the optimum recording power range and the sensitivity of the medium.

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The only information recorded is that of the test runs, The claims do not recite that the values of S or R are stored on the medium. The applicant should insert language clearly stating this into the claims and address the issue raised by the teachings of Ando et al. '175. The recording of test runs is taught in Suzuki et al. EP 1111598 or Suzuki et al. '780. The current language describes selecting the values of S and R and calculating other, but does not describe where they are stored. Currently this includes both on the media and also on another drive on the computer.

The applicant's arguments neglect the fact that S are the desired values relating to the $g(P)$ which corresponds to the sensitivity of the medium described by Suzuki et al. '780, the optimum recording power is also determined in Suzuki et al. '780 and the R corresponds the power margin discussed in Suzuki et al. '780. The applicant refers to P_t which is unrecited in the claim. The optimum recording value is P_o in the claims. Further, this value, the power margin and the sensitivity (γ) are described in Suzuki et al. '780. The calculation of $g(p)$ yields a sensitivity to power changes and the choosing a single value for S within the range defines the linear portion of the sensitivity curve ($D \log H$) and the minimum (base) recording power. The R value defines the range upward from that and defines the upper range of the useful power range with the medium. These parameters correspond to those discussed by Suzuki et al. '780, but go under different names. The rejection stands.

9. Claims 21,24,27,30, 44-55 and 57-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Yamada et al. EP 0717404 or Yamada et al. EP 0735158, in view of Kikukawa et al. '722 and Mizuno et al. EP 1047056, further in view of Ando et al. '175 and Suzuki et al. '780.

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To support the assertion that embossing information relative to the performance characteristics of the optical recording media would have been obvious, the examiner cites Ando et al. '175 which teaches the provision of control data and specification data for the optical recording medium in a non-write-able portion of the medium and Suzuki et al. '780 which describe specific methods of characterizing the performance and holds that it would have been obvious to one skilled in the art to modify the media rendered obvious by the combination of **either one of** Yamada et al. EP 0717404 or Yamada et al. EP 0735158 with Kikukawa et al. '722 and Mizuno et al. EP 1047056 by determining the performance characteristics and recording this information as described by Suzuki et al. '780 to prevent improper choice of laser powers and to provide at least some of this data as embossed information as described by Ando et al. '175 to allow the user for forgo the optimization process.

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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11. Claims 51-54 and 57-62 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-14, 17-25 and 27-32 of copending Application No. 09/966171 (US 2002/0110063), in view of Mizuno et al. EP 1047056.

The examiner holds that it would have been obvious to modify the claimed invention of copending Application No. 09/966171 (US 2002/0110063) by using Al reflective layers containing 0.3-2.0% of Si, Cr, Ti or Ta or Ag layers containing 0.2 to 4% of Au, Pd, Pt, or Ti as disclosed by Mizuno et al. EP 1047056 in place of the single reflective layer composition disclosed with a reasonable expectation of forming a useful phase change optical recording medium based upon the disclosure of equivalence by Mizuno et al. EP 1047056.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The applicant argues that media of the instant claims where the media have the composition of $\text{Ag}_{0.1-7}\text{In}_{2-10}\text{Sb}_{64-92}\text{Te}_{5-26}\text{Ge}_{0.3-3}$ are not obvious over the media of Application No. 09/966171 which claim $(\text{AgGe})_{0.1-7}(\text{Ga,Bi,In})_{1-15}\text{Sb}_{61-85}\text{Te}_{20-30}$ recording layers. The examiner has the position that a timewise extension of the monopoly accorded the applicant is unjustifiably extended for the embodiments where the recording layer composition is $\text{Ag}_{0.1-6.7}\text{In}_{2-10}\text{Sb}_{64-85}\text{Te}_{20-26}\text{Ge}_{0.3-3}$.

The applicant argues that the claims of the copending application have not been allowed and are under final rejection. An RCE has been filed and these claims are active.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kobayashi et al. 11-134715 and Kobayashi et al. 11-025515 teaches optical recording media with Ag-Ru reflective layers which having increased reliability and durability.

Tomie et al. JP 2000-228032 teaches Ag-Cu reflective layers having high performance and stability.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebrannndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J. Angebranndt
Primary Examiner
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03/20/07